Safety Review Committee
January 21, 2005
10:00 AM – 12:00 PM

Minutes

Members Present
Joel Ager, Michael Banda, John Bercovitz, Dennis Collins, Sharon Doyle, Ben Feinberg, Kathie Hardy (for Richard Kadel), Mack Kennedy, Peter Lichty, Don Lucas, Augusto Macchiavelli, Karen Ramorino, Linfeng Rao, Peter Seidl, Linda Smith, Scott Taylor, Weyland Wong, Hisao Yokota

Members Absent
Ken Fletcher

Others Present
Steven Chu, Richard DeBusk, Phillip Hugenholtz, Eugene Lau, Dan Lunsford, David McGraw, Robert Mueller, Phyllis Pei, Sandra Silva, Donna Spencer, Pat Thomas, Robin Wendt, Otis Wong

Annual Report for 2004

Copies of the 2004 Annual Report of the Safety Review Committee (SRC) were distributed to all attendees. Ben Feinberg presented the highlights of the report to LBNL Director Steven Chu. Committee members and guests were introduced to the Director.

Management of Environmental Safety and Health (MESH) reviews were one of the key activities of the SRC in 2004. The reviews examined the Environment, Safety, and Health (EH&S) management systems of 5 divisions and identified common opportunities for improvement. Other important activities included:

- Ensuring communications between EH&S Division and other divisions to resolve findings from the Occupational Safety and Health Administration (OSHA) audit;
- Encouraging clean-up and prevention of legacy waste. LBNL is making good progress on cleaning up problems from years ago. The SRC suggested ways to use the Hazards, Equipment, and Authorizations Review (HEAR) database to identify potential problems. We supported linking the HEAR, Chemical Management, and Human Resources systems to identify chemical owners who are about to leave LBNL and alert their home divisions to facilitate lab clean-outs and transfer of chemical ownership.
- Looking for ways to reduce ergonomic injuries. An ergonomics pilot program was funded in 2003 to provide matching funds for ergonomics equipment in selected non-block funded divisions. This program was not funded in 2004 because most incidents were in block-funded divisions. Peter Lichty invited a speaker from Los Alamos who discussed her research on ergonomics. SRC is looking for other successful ergonomics programs for benchmarking.

In 2005, the SRC wants to look at contingency planning. Stanford Linear Accelerator (SLAC) and Argonne experienced problems related to shut-downs after safety incidents. LBNL needs a plan to determine how to respond to major safety incidents: which systems should be shut down to prevent similar accidents, what needs to be accomplished during the shutdown, and what are the criteria and procedures for bringing systems back into operation safely. Jim Floyd is leading a working group to study the issues. The Department of Energy (DOE) Berkeley Site Office (BSO) will be consulted in developing the plan.

The activities of the subcommittees included:

- The new Laser Safety Subcommittee, chaired by Don Lucas, worked with Laser Safety Officer (LSO) Ted de Castro to set up a new program of observing work in laser labs to identify good practices and teach researchers about safe procedures.
- The Electrical Safety Subcommittee, chaired by Dennis Collins, studied the SLAC accident and developed interim policies for energized work.
- The Mechanical Safety Subcommittee, chaired by John Bercovitz, has experienced an increase in requests for lift reviews.

The MESH reviews identified some noteworthy practices, including improvements in clarifying lines of authority and increased hands-on leadership by Division Directors and Safety Coordinators. Supervisors and employees have more accountability for safety. Earth Sciences Division has a model website. Nuclear Science Division and Earth Sciences Division have impressive systems for documenting safety systems in laboratories.

There MESH reviews also documented some opportunities for improvement. The Facilities contracting process could be improved to include both "carrots" and "sticks" for safety performance. Safety reviews of small work order projects could also be improved. Overcrowded buildings in poor condition seem to be endemic at LBNL and were found in 2003 also. Several divisions are struggling with documentation and/or closing out of inspection findings.

The SRC makes recommendations as to when the next MESH review should occur for each division. The Integrated Safety Management (ISM) Panel will make the final determination after their review.

At the December meeting, the SRC discussed the Institutional Biosafety Committee (IBC) activities. There is some continuing debate about what types of research proposals should be reviewed and the level at which decisions should be made. Changes to the Committee charter have been proposed. Scott Taylor described the concerns of the Life Sciences Division. The National Institutes of Health (NIH) mandates that recombinant DNA research be reviewed and imposes limited rules. There is a question as to whether other OSHA, NIH, DOE, and other agency requirements should be included in the scope of the IBC reviews. The division directors would like to be empowered to make more decisions about their research. Reviewing any whole plant or animal research may be too broad a scope for the IBC.

Eugene Lau said that UCSF's biosafety committee has a formal monthly review process. At UCSF, the biosafety officer reviews Biosafety Level 1 research proposals to determine whether

all aspects were considered. Sunshine Project activists are looking at IBC meeting minutes and have criticized some campuses. Their criticism may trigger regulatory agency inspections. Eugene believes the Biosafety Officer should review proposals to determine whether they have been categorized correctly. For example, if the killing of vaccine organisms is not properly certified, the risk level would be higher. The IBC may need to improve and speed up the review process, so they can provide oversight without delaying research. At UCSF, the biosafety committee meets monthly, while at LBNL, it meets every 3 months. Some Life Sciences researchers believe the LBNL IBC takes too long to complete reviews, and that improved training can resolve the committee's concerns about self-authorizations. Phyllis Pei volunteered to meet with Scott Taylor and Life Sciences Division Director Joe Gray to discuss the issues, and they will go to Steven Chu together if there is still disagreement about the charter.

Ben Feinberg asked Steven Chu if he had any particular issues for the SRC to work on this year. Dr. Chu said that all Office of Science laboratory directors will be meeting with Ray Orbach regarding their safety plans. Office of Science Laboratories are being directed to maintain safety records in the upper 10% of all similar research organizations. Because all the labs have good records, a few events can drive up the accident rates. Robin Wendt said the industry group used for comparison includes low-hazard "think tanks", and that some laboratories outsource their facilities and construction work and do not include those types of accidents in their rates. We want to improve our accident rate, not just change our bookkeeping method. Dr. Chu welcomes the increased DOE emphasis on safety, but is concerned that employees may be discouraged from reporting accidents or near-accidents if they think it will affect their performance review or their supervisor. He supports realistic goals, and wants to encourage reporting of accidents and incidents. We want to learn from our experiences and not drive the information underground. Dr. Chu asked the SRC to help develop systems to encourage reporting. Phyllis Pei added that she took the number of accidents per division off the performance scorecard this year to encourage accident reporting. She has also asked Peter Lichty to lead a recognition program for people who share lessons learned. Researchers are concerned that they may be discouraged from mentoring students because of the increased accident risk and the potential DOE adverse reaction to any incidents.

Bicycle Safety

Dan Lunsford described a bicycle safety policy that he and Jack Salazar have been developing. The draft policy has been reviewed with stakeholders, including the Bicycle Coalition and Safety Coordinators. The topography of the Lab exposes bicycle riders to hazards. Dr. Chu is a bicycle commuter, and one of his first experiences at LBNL was almost being hit by another bike rider who was taking a shortcut across a parking lot. He wants to take a caring approach to educate bike riders about safety. The policy would require helmets and bike permits. Riders would be made aware of the policy through brochures and a Job Hazard Questionnaire question that would link to a brief safety quiz/tutorial. Upon completion of the quiz, Site Access would send a permit. The program would be voluntary while it is being phased in. Dr. Chu would promote the program by participating in a Bicycle Coalition event, possibly in conjunction with the Earth Day celebration.

Joel Ager presented some feedback he received from a bike rider in his division. The rider feels that bicycle safety is already adequately covered by the California Vehicle Code, and that bike riders are not being treated as equal to auto drivers. He asked for lockable bike racks that are

protected from the rain. Dan Lundgren explained that bicycle safety is just the first step in traffic safety improvements, and he plans to re-examine motor vehicle and pedestrian safety as well. Dr. Chu asked for more efforts to obtain input from bike riders, because not all riders belong to the Bicycle Coalition. Communications with car drivers about sharing the road with bicyclists should be rolled out at the same time as the bicycle policy.

Electrical Safety

Dennis Collins described measures being taken at LBNL to reduce arc blast risks, in response to the SLAC accident. PUB-3000, chapter 8 will be re-written to clarify requirements and provide additional information. The NFPA 70E electrical worker protection standards have been adopted by OSHA and need to be included in PUB-3000. The permit process and the types of authorization required for each level of hazard will be clarified. Documentation of electrical worker qualifications will be required. Facilities will label all circuit breaker panels with the hazard level. The importance of proper Lockout/Tagout verification practices will be emphasized and incorporated into training. Electrical safety and LOTO course content will be expanded. Very few people need to do energized work. The required controls will be identified in the permit application. The Electrical Safety Subcommittee is considering holding a safety meeting for electrical workers in the Bldg. 50 Auditorium. We need to ensure all employees who work with electrical systems read and understand the requirements.

Bob Mueller added that the title to PUB-3000, Chapter 18, is being changed to "Lockout/Tagout and Verification." The chapter will emphasize work procedures. Breakers must be labeled properly and panel labeling kept up-to-date. Home-built equipment can cause problems. The hazard increases with the amount of time the equipment can sustain a fault condition. A supervisor's consent is needed for low-hazard work and a written permit for high-hazard work. Supervisors need guidance. It is not always safe to assume vendors/contractors are competent, or that researchers who use the equipment understand all the hazards. LBNL should look at how other labs manage the servicing of electron microscopes, x-ray machines, and similar equipment.

Minutes of December Meeting

The minutes of the December meeting were approved.

Comments from the Chair

New EH&S staff and SRC members were introduced. The committee welcomed Richard DeBusk, the new EH&S Safety Group Leader, who comes to us from CH2M Hill in Hanford, and Eugene Lau, the new EH&S Deputy, who comes to us from UCSF. Phil Hugenholtz will be the new Genomics Division representative on the SRC. Bob Mueller will be the new Electrical Safety Subcommittee chair. Don Lucas will be the new chair of the SRC.

The Committee thanked outgoing chair Ben Feinberg and Genomics Division representative Sharon Doyle for their service.

The Office of Assessment and Assurance may be reorganized, but it will continue to provide support to the MESH reviews.

Work Suspension Planning

Jim Floyd is leading a task force to develop a work suspension and restart plan. It will be a general tool, including consideration of radiation safety, lasers, electrical systems, chemical and biosafety, and student and contractor work. The purpose of a shutdown following a safety incident should be to implement prudent and timely action to prevent similar accidents while the investigation takes place.

We want to ensure any shutdown is targeted and has the proper scope. When a major safety incident occurs, LBNL needs to be able to quickly decide the scope of applicability, whether it is a local or systemic issue, and what systems are involved. The depth of the response may vary from a complete shutdown to a warning notice.

We want to be able to avoid unintended consequences during a shutdown. For example, the Los Alamos shutdown after a laser accident included medical services and the cafeteria. . We need to define essential services and ensure valuable items are preserved during a shutdown.

To recover quickly, conditions for start-up need to be established. We need to incorporate ISM Principles into the process. There are similar plans and experiences we can use for guidance. DOE 425.1C describes nuclear facility start-up, but this is not specific enough. The Emergency Command Center is working on plans for business resumption after a major natural disaster. ORPS reports and radiation safety stand-downs, and other safety stand-downs can provide useful lessons learned. The working group will talk to other facilities about their experiences

The DOE site office needs to be part of the decision-making process. The process should be integrated with the Occurrence Reporting and Processing System (ORPS) reporting procedures and will not supercede them. Jim Floyd plans to give a talk for DOE BSO. Donna Spencer commented that the site offices are looking at the costs of restarts. BSO wants to support the planning effort and share the results within the Office of Science. During the laser safety videoconference, Ray Orbach stated that there will be consequences for unsafe actions. Dr. Chu may discuss the planning process at the lab director's safety meeting.

The working group is developing a "straw man". Jim Floyd asked for comments. He will be providing updates as the planning process proceeds.

Laser Safety

Laser Safety Subcommittee Chair Don Lucas provided an update on two new policies. The Laser Safety Officer's hands-on inspection and observation of alignment procedures has begun and has already resulted in some improvements in procedures. The inspections are also increasing the LSO's familiarity with the laser labs and improving communications with laser users. In addition, all Class 3b and 4 laser users are being required to complete a special 1-hour safety training class. The first class will be January 28 in the Bldg. 50 Auditorium, and there will be another class in February, and a class on campus. The class will count as laser safety retraining. Ben Feinberg asked if the class could be videotaped, so it can be shown to ALS Users who arrive later and want to use lasers.

The meeting was adjourned at 12:00 noon.
Respectfully submitted,
Patricia M. Thomas, SRC Secretary